MONTANA CLINICAL COMMUNICATION AND SURVEILLANCE REPORT

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HEALTHCARE PROFESSIONALS CAN INFLUENCE SODIUM-REDUCTION ACTIVITIES OF PATIENTS WITH HYPERTENSION

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CARDIOVASCULAR HEALTH AND DIABETES PROGRAMS

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INTRODUCTION

The importance of reducing salt* intake in the general population and particularly among those with hypertension gained renewed attention in a report from the Institute of Medicine highlighting the evidence for the benefits of reduced salt intake in the U.S.[1] It is estimated that reduced daily salt intake in the U.S. could reduce the incidence of heart disease and stroke significantly and save over 10 billion dollars a year.[2] The average salt intake in the US is well above the recommended levels, and much of the dietary salt comes from processed foods.[3] The benefits of reducing sodium intake for those with hypertension have been amply documented.[4] Low sodium intake combined with the Dietary Approaches to Stop Hypertension (DASH) diet produced blood pressure lowering equivalent to the effect of therapy with a single antihypertensive agent. Thus the DASH eating plan, in combination with reduced sodium intake, is now widely recommended for those with hypertension.[5]

** For the purposes of this report, the term "salt" and "sodium" are used interchangeably.*

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Sodium intake recommendations, adapted from Dietary Guidelines for Americans 2005 (6,7)

Persons with hypertension, blacks, and middle-aged and older adults should:

- Limit intake to 1,500 mg/day of sodium

All other persons should:

- Consume less than 2,300 mg/day (approximately 1 tsp of salt) of sodium.
- Choose and prepare foods with little salt.

To provide information about attitudes, monitoring practices and treatment patterns for hypertension in Montana, a telephone survey of adults with clinically-diagnosed hypertension was conducted using questions adapted from a similar survey conducted by the Canadian Hypertension Education Program.[8] This report focuses on responses to questions about advice received by, and efforts made by, individuals with hypertension to reduce their sodium intake.

METHODS

Between 2009 and 2010, the Montana Cardiovascular Health Program conducted a statewide random digit dialing telephone survey of 2,100 Montana residents 45 years and older. Based on the total number of adults, aged 45 and older, living in the household, one adult from the household was selected to participate. A trained interview team using computer-assisted telephone interviewing software conducted the survey. The questionnaire was designed to survey respondents with and without hypertension.

All respondents were asked 38 questions about healthcare access, blood pressure measurement, cardiovascular disease (CVD) knowledge, CVD history and risk factors, and demographic information. Respondents with hypertension were also asked an additional 54 questions assessing: hypertension diagnosis and healthcare provider, medication use, clinical recommendations, self monitoring of blood pressure, information and training received, and self management.

To determine which arm of the survey the respondent completed, the respondent was asked if they had been told by a doctor, nurse, or other healthcare professional that they have high blood pressure or hypertension. Female respondents who reported hypertension during pregnancy were not considered to have hypertension. A stratified sampling design was used to include regions with high and low population densities and a region with a relatively high proportion of American Indian residents.

Only data collected from respondents with hypertension were used for these analyses. To further confirm a diagnosis of high blood pressure, respondents were asked, "Were you told on two or more different visits to a doctor or other healthcare professional that you had high blood pressure?" Respondents were asked

questions regarding their history of CVD and CVD risk factors including myocardial infarction, angina or coronary heart disease, stroke, transient ischemic attack (TIA), diabetes, high cholesterol, smoking and obesity. Female respondents who had been told by a doctor or other healthcare professional that they had gestational diabetes during pregnancy were not considered to have diabetes. Respondents who reported that they smoked every day or some days were categorized as current smokers. Respondents who ever smoked at least 100 cigarettes in their entire life but do not currently smoke were categorized as former smokers. Self-reported height and weight were used to calculate body mass index (BMI, kg/m^2), and a value of 25.0 – 29.9 kg/m^2 was categorized as overweight while a value of 30.0 kg/m^2 or greater was categorized as obese.

To assess blood pressure clinical recommendations, respondents were asked whether their doctor or other healthcare professional ever advised them to: cut down on salt or sodium, reduce alcohol use, exercise, quit or reduce smoking or take prescription medication to control blood pressure. To assess the individual's sodium reduction activities, respondents were asked the following five questions: "Are you now doing any of the following to help lower or control your high blood pressure? Cutting down on salt or sodium; Reducing use of the salt shaker at the table; Using lower sodium canned or packaged foods; Reducing use of salt during cooking, not including baking; and Reading food labels for salt or sodium content?" Respondents that reported they did not use salt and those that did not drink alcoholic beverages were excluded from analysis in reducing salt and alcohol consumption, respectively.

Data analysis was completed using SPSS 17.0 (SPSS Inc., Chicago IL). Chi-square tests were used to compare differences in sodium reduction activities among respondents who recalled being advised to cut down on sodium and those who did not recall receiving this advice.

RESULTS

Among respondents to the statewide hypertension survey (N = 2,100), 866 reported having been told by a doctor, nurse or other healthcare professional that they had high blood pressure or hypertension. To further confirm respondents with hypertension, only those who reported being told on two or more different visits to a doctor or other healthcare professional that they had high blood pressure (N = 762, 88%) were included in these analyses. The mean age of respondents was 66.5 years (range 45 – 99) with 54% being 65 years or older. In addition, 57% were female, 87% were white and 88% reported 12 or more years of education.

Table 1. History of cardiovascular disease (CVD) and CVD-related risk factors among respondents 45 years and older with hypertension, Montana, 2010.

	Total
Risk Factors	% (n)
Diabetes	24 (181)
High cholesterol	65 (485)
Smoking status	
Current smoker	13 (100)
Former smoker	38 (288)
Body Mass Index	
Overweight	35 (255)
Obese	39 (284)
Conditions	
Heart attack	12 (94)
Angina	9 (67)
Stroke	4 (33)
TIA	8 (58)
Any CVD*	19 (146)

*Any CVD includes: acute myocardial infarction, angina or coronary heart disease, and stroke.

Twenty percent of survey respondents reported history of CVD (i.e., heart attack, angina or coronary heart disease and stroke). Additionally, 74% of respondents were overweight or obese, and 24% and 65% also reported being told they had diabetes or high cholesterol, respectively (Table 1).

To help control or lower their high blood pressure, the majority of respondents recalled receiving advice from a doctor or healthcare professional to take prescription medication, exercise, and if they were current smokers to quit or reduce their smoking (Figure 1). In addition, 71% of respondents recalled receiving counseling from a healthcare professional to cut down on sodium, and one-half recalled receiving advice to reduce alcohol use to help lower or control their high blood pressure (Figure 1).

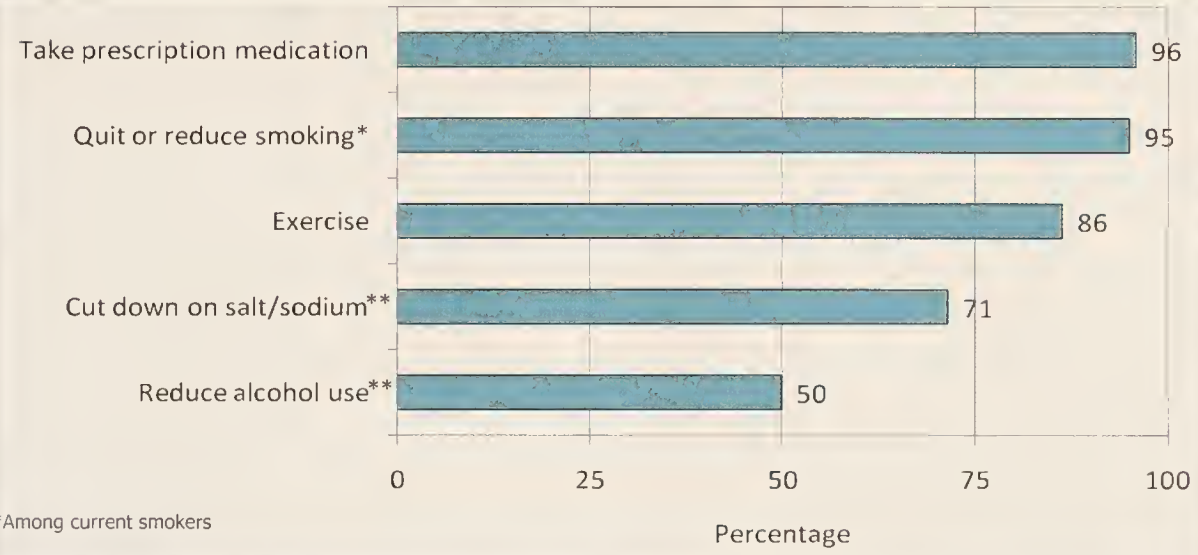
Overall, 87% of survey respondents were doing at least one sodium-reduction activity to help lower or control their high blood pressure. (Data not shown) Over 70% reported reducing use of the salt shaker at the table and reducing use of salt during cooking (Figure 2). Approximately 60% reported reading labels for sodium content and using lower sodium canned or packaged foods as salt reduction activities they are doing to help control or lower their high blood pressure.

Survey respondents who recalled being advised by their healthcare provider to cut down on sodium intake were more likely to report that they are taking actions to control their blood pressure by reducing use of salt at the table and cooking, using lower sodium canned or packaged foods and by reading food labels for sodium content than those that did not recall receiving this advice (Table 2).

LIMITATIONS

Data from telephone surveys have several limitations. First, the survey was conducted by telephone and does not reflect experiences of individuals in households without a telephone. Second, the information provided

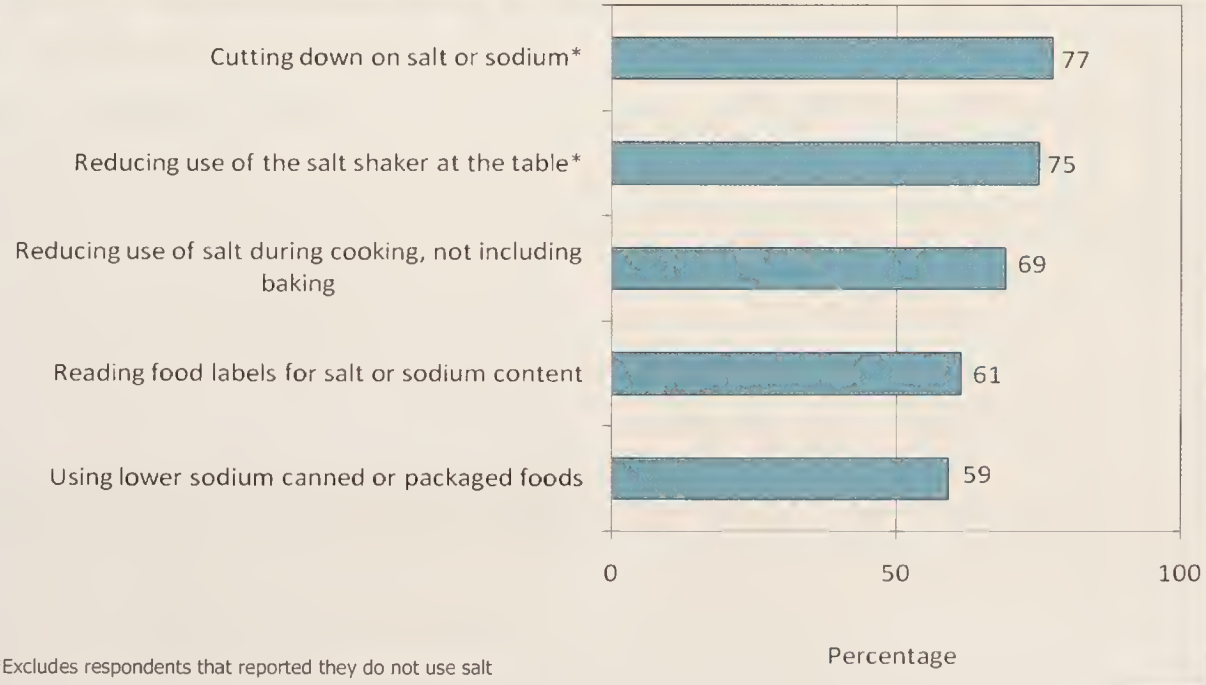
Figure 1. Physician or healthcare provider advised to do the following activities to control hypertension among respondents aged 45 years and older with hypertension, Montana, 2010.



*Among current smokers

**Excludes respondents that reported they do not use salt or alcohol, respectively

Figure 2. Sodium reduction activities among respondents aged 45 years and older with hypertension, Montana, 2010.



*Excludes respondents that reported they do not use salt

Table 2. Sodium reduction activities among respondents 45 years and older with hypertension, by whether advised to cut down on sodium, Montana 2010.		
	Advised to cut down on sodium	
	No (n = 172)	Yes (n = 429)
	% (n)	% (n)
Cut down on salt/sodium	53 (92)	87* (373)
Reduce use of salt shaker at table	58 (99)	82* (352)
Using lower sodium canned/package foods	42 (72)	67* (283)
Reduce salt during cooking	54 (93)	79* (334)
Read food labels for salt/sodium content	50 (86)	67* (289)

*p-value < 0.001

in this report is based on self-reported responses and are subject to recall bias. Third, the survey was conducted among adults 45 years and older residing in Montana and results cannot be generalized to adults less than 45 or the general United States population. Finally, the data presented in this report were not weighted to account for potentially important factors pertaining to the representativeness of the respondents.

CONCLUSION

The findings from the survey of adults with hypertension in Montana have important implications. Most individuals with hypertension recalled that they had been advised by their healthcare provider to take prescription medications and to quit smoking. However, only 70% recalled being told to cut down on their sodium intake. Some individuals reported reducing their sodium intake on their own, but those who recalled specific advice about reducing sodium were much more likely to say that they had taken specific steps to reduce sodium.

Controlling hypertension is a substantial challenge. Clinicians in Montana have an opportunity to help their patients with hypertension not only with medication but also with simple yet important advice to reduce their sodium intake and make other lifestyle changes. Resources are available at www.cdc.gov/salt, www.heart.org (search on "Shaking the Salt Habit") and www.nhlbi.nih.gov (Search on "DASH").

REFERENCES

[1] Institute of Medicine. Strategies to Reduce Sodium Intake in the United States. April 2010. http://www.iom.edu/~/media/Files/Report%

20Files/2010/Strategies-to-Reduce-Sodium-Intake-in-the-United-States.pdf

[2] Bibbins-Domingo K, et al. Projected effect of dietary salt reductions on future cardiovascular disease N Engl J Med. 2010;362:590-9.

[3] Appel LJ, et al. Compelling evidence for public health action to reduce salt intake. N Engl J Med, 2010; 362:650-2.

[4] Sacks FM, et al. Effects on blood pressure of reduced dietary sodium and the dietary approaches to stop hypertension (DASH) diet. N Engl J Med, 2001;344:3-10.

[5] Appel LJ. American Society of Hypertension Writing Group. ASH position paper: Dietary approaches to lower blood pressure. J Am Soc Hypertens. 2009;3:321-31.

[6] CDC. Sodium Intake Among Adults ---United States. MMWR 2010;59:746-749. Online version: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5924a4.htm?s_cid=mm5924a4_e%0d%0a

[7] US Department of Health and Human Services, US Department of Agriculture. Dietary guidelines for Americans 2005. 6th ed. Washington, DC: US Department of Health and Human Services, US Department of Agriculture; 2005. Available at http://www.health.gov/dietaryguidelines/dga2005/document/pdf/dga2005.pdf.

[8] Canadian Hypertension Education Program. http://www.hypertension.ca

SAVE THE DATES

Big Sky Pulmonary Conference
Team Based Pulmonary Care: Best Practices and Emerging Research
Huntley Lodge-Big Sky, MT
March 17-19, 2011
Contact Katie Loveland at kloveland@mt.gov

Montana Cardiovascular Health Summit
Best Western Helena Great Northern Hotel-Helena, MT
April 8, 2011
Contact Crystelle Fogle at cfogle@mt.gov

Worksite Health Promotion Workshop
Best Western Helena Great Northern Hotel-Helena, MT
May 11, 2011
Contact Linda Krantz at lkrantz@mt.gov

Montana Diabetes Conference 2011
Best Western Helena Great Northern Hotel-Helena, MT
October 13-14, 2011
Contact Susan Day at sday@mt.gov

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WHAT ARE THE MONTANA DIABETES PREVENTION AND CARDIOVASCULAR HEALTH PROGRAMS AND HOW CAN WE BE CONTACTED?

The Montana Diabetes Control and Cardiovascular Health Programs are funded through cooperative agreements with the Centers for Disease Control and Prevention and Health Promotion (1U58DP001977-01), the Division for Heart Disease and Stroke Prevention (5U50 DP000736-05) and through the Montana Department of Public Health and Human Services.

The mission of the Diabetes Control and Cardiovascular Health Programs is to reduce the burden of diabetes and cardiovascular disease among Montanans. Our web pages can be accessed at http://www.diabetes.mt.gov and http://montanacardiovascular.mt.gov.

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